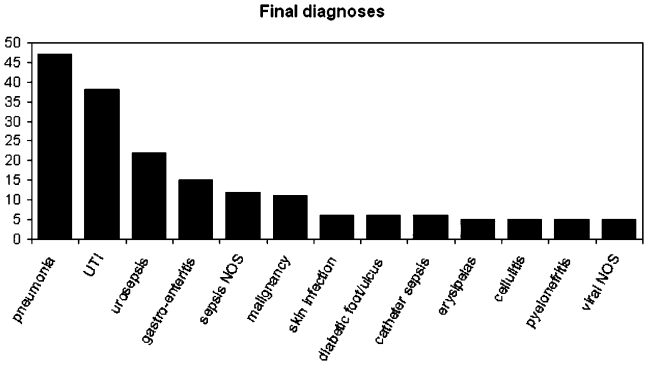
Results: Between April 2008 and April 2009, 403 patients with fever were identified (207 males, 51.4%). Mean age was 51.4 yrs (SD 21.2 yrs). 223 Patients (55.6%) were hospitalized, 32 patients (7.9%) died and 18 patients (4.5%) were admitted to the Intensive Care Unit. In 129 febrile patients (32.0%), infection was proven. 84.4% of patients had bacterial (29.0% urinary tract infection (UTI), 23.2% pneumonia), 5.6% viral and 10.0% parasitic or fungal infection. In 34 patients (8.4%), dengue fever was suspected; dengue was serologically proven in one patient. 21 Patients (5.2%) were discharged with a non-infectious diagnosis, most frequently malignancy. 172 Patients (42.7%) were discharged without a clear diagnosis.



Final diagnoses of febrile patients on the emergency department, Curacao

Conclusion: A high mortality rate of 7.9% was observed in this cohort. We found a high prevalence of bacterial infections, with pneumonia and urinary tract infections as most common causes of fever. Not many typical tropical infections were seen, although many patients were diagnosed with probable dengue fever during the rain season, which could not be corroborated serologically. One in 20 patients presenting with fever did not have an infectious disease.

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51.004

Transmission risk and predictability of invasive meningococcal disease

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Background: In light of the media coverage concerning recent infectious disease outbreaks such as the ongoing influenza pandemic as well as previous ones involving Severe Acute Respiratory Syndrome (SARS), the public domain has become more conscience of infectious diseases as well as the effect of travel aiding their spread. Meningococcal meningitis has been a disease which among other factors such as age, climate and life style, is facilitated by travel. The causative bacterial agent, *Neisseria meningitidis*, being spread through aerosol respiratory droplets can cause Invasive Meningococcal Disease (IMD), and is a widely distributed, complex human disease affecting all age categories. Forecasting models exist for diseases based on vector-borne or wind related movement, as well as climate derived assessments, and recently travel oriented detection. Hence a combination of several factors ranging from meteorological to molecular level information should aid in determining likely occurrences of meningococcal meningitis epidemics in spatial and temporal means.

Methods: A systematic review was conducted in order to identify the different risks and models available in terms of IMD spread. Varying risk stratification was used to classify risk factors such as: travel related spread, respiratory co-infections, the effect of new meningococcal clones into a susceptible population, low humidity, high temperatures and lifestyle based aspects. These data will be used to create an early warning system generated through various technologies and transmission models in order to highlight risk areas and periods of ongoing IMD.

Results: As other studies have shown, travel patterns such as destination, duration and timing during the year affect risk of IMD development and spread among travelers, whilst climate, geography and factors such as virulence of circulating strain are more important in determining the severity of an outbreak in terms of local occurrence and potential epidemic developments.

Conclusion: Meningococcal meningitis is not only a well established threat in terms of epidemic or endemic occurrences, but also for travelers. Hence the development of more accurate and timely detection and forecasting methods are required to help in decision making processes involving prevention and early warning purposes.

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51.005

Hospitalizations due to pneumonia and case-fatality rates in Brazil between 2003 and 2007

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Background: In emerging countries, pneumonia is a leading cause of hospitalization and death, particularly among young children and older adults. Between 2000 and 2003, 13% of all deaths in children under 5 years of age living in Brazil were due to pneumonia. Overall, deaths in Brazil due to pneumonia averaged 4% between 1979 and 2001.

Methods: This was a retrospective study to quantify the rate of hospitalizations due to pneumonia (HDTP) and cases-fatality rates (CFR) in age groups ranging from <1 years old to 80 years and older. An online, interactive web-based database of individuals hospitalized during the 5-year period, 2003-2007 covered by the Integrated Health System (DATASUS) in Brazil was used to identify cases. The Instituto Brasileiro de Geografia e Estatística database served as the source of the population/denominator statistics used for

the incidence rate calculations. Case-fatality rates are the percentage of HDTP cases who died.

Results: Overall, the observed rate of HDTP in Brazil has shown a downward trend averaging 4.5 per 1000 residents in 2003, and 3.9 in 2007. Children <1 year old had the highest reduction in rates of HDTP, from 47 per 1000 in 2003 to 36.4 in 2006. Brazilians 80+ years old had the next highest incidence rates, averaging about 23 to 27 HDTPs per 1000 residents during the study period. CFRs related to HDTP have increased steadily over time, averaging 2.9% in 2003, and 4% in 2007. With the exception of the <1 year old age-group, CFRs increased with age, and in the 80+ age group averaged between 16% and 18%. In age groups under 5 years, CFRs have declined slightly beween 2003 and 2007. In all other age-groups, particularly the ones 30 years and older, CFRs have generally risen.

Conclusion: As expected, the highest rates of HDTP were observed in the extremes of age, very young and old. While a slight reduction has been observed in HDTP rates, CFRs have progressively risen during this same period particularly for adults aged 80+. Pneumonia remains an important health problem in Brazil.

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51.006

Meningococcal meningitis epidemic in Arua district North West of Uganda

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Background: Meningitis due to Neisseria meningitidis has an epidemic potential and a high case fatality rate. On 3rd September 2008, a meningitis epidemic was reported in Arua district health office, in north western Uganda. The objective of the investigation was to confirm the meningitis epidemic, identify the causative agent, risk factors and assess the district response capacity to handle the epidemic.

Methods: Community based cross-sectional study. We purposively selected cases, their families, District health team & local leaders for interview. Cerebral spinal fluid samples were drawn from cases and sent to Central Public Health Laboratory of Ministry of Health to isolate the causative agent. Frequencies and distributions of cases with respect to age groups and affected communities with EPIINFO 2006 were done.

Results: A total of 44 cases were detected and 10 deaths occurred to meningitis. The Case Fatality Rate was 22.7%: highest CFR (46.2%) occurred in those above 30years.Age range was 3months to 65years. The causative agent for this meningitis epidemic was identified to be Neisseria meningitides type A with latex rapid test. 70.5% of the cases were <30 years and the male to female ratio was 1:2. Characteristically, it was discovered that the epidemic occurred in the area which had missed vaccination against meningitis in the previous outbreak of meningitis. Sleeping in poorly ventilated huts and overcrowding: 3-5 huts with 7-10 people/family cluster were risk factors to this meningitis.

Conclusion: Highest case fatality rate occurred amongst persons who are over 30 yrs old. Overcrowding, staying in poorly ventilated huts and lack of previous vaccination were thought to be predisposing factors to this meningitis epidemic.

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51.007

The study of epidemiological data of the mumps and the effect of MMR vaccine in the Albanian children

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Background: Up to March 2005 in our country mumps was endemic diseases with every year epidemic and the children were unvaccinated for these diseases. From March to September 2005 was made a massive MMRII vaccination for the children under 7 years and from this year this vaccine was included in our routine national program vaccination. The incidence of this diseases in years 2003 was 72.9/100000 habitants and in 2007,2008 were respecti vely 26.9 and 2.6/100000

The aim of the study: was to show the epidemiological data of the mumps and his complications in Albanian children and to show the effect of the MMRII vaccine in the decrease of the incidence of this diseases in Albania.

Methods: This is a retrospective study .In this study were unrolled 147 children admitted in our hospital from January 2003 to December 2008.The children were the age from 18 months to 14 years old. For each children were studied the sex, the age, the season, origin, complications, length of the hospitalization and the status of the vaccination. All the patients admitted in the hospital before March 2005 were unvaccinated.

Results: The average age was 6.3, 96 cases or 65.3% were 5-14 years old followed by 1-4years old with 47 cases or 31.9%,predominantly male patients with 112 cases or 76.19%, 105 cases or 71,43% were admitted in the spring and summer seasons, there is not any difference for origin. We saw these complications: neurological manifestations in 61 cases or 41.5%, pancreatitis 24 cases or 16.3%, orchitis 18 cases or 12.2% manly in the patients up 12 years old, tonsillitis and maxillitis 28 cases19.1%.The spread of the patients by years was shown in the following table:

Years	2003	2004	2005	2006	2007	2008
No of cases	16 or10.89%	36 or 24.5%	61 or 41.5%	23 or 15.6%	9 or 6.12%	2 or 1.36%

Conclusion: The majority of the cases was happen in the summer and spring, the male suffer more often from this diseases and the neurological manifestation were seen more often as other manifestations. In the last 2 years, the vaccine